

Claims

1.
A computer-implemented method for representing IMS messages as XML documents, the method comprising:

generating an XML document template from an IMS message definition; and
merging an IMS message with the generated template to produce a
corresponding XML document.

2. The method of claim 1, wherein the generating step comprises:
obtaining an IMS message definition;
obtaining a DTD for representing arbitrary IMS message definitions;
compiling the IMS message definition with an option configured to produce
an associated data (Adata) file; and
parsing the Adata file using the DTD to generate an XML document
template corresponding to the IMS message definition.

3. The method of claim 2, wherein the generating step comprises:
obtaining an IMS message definition;
obtaining a DTD for representing arbitrary IMS message definitions; and
parsing the IMS message definition using the DTD to generate an XML
document template corresponding to the IMS message definition.

1 4. The method of claim 2, wherein the Adata file comprises at least one
2 IMS message definition in a relatively language independent format compared with
3 program source code.

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5 5. The method of claim 2, wherein obtaining the IMS message definition
6 comprises:

7 extracting the IMS message definition from one of an application source code
8 file and a copy file.

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10 6. The method of claim 2, wherein the step of obtaining the DTD
11 comprises:

12 creating a UML object model for representing arbitrary IMS message
13 definitions; and
14 processing the object model using an XMI utility to generate the DTD.

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16 7. The method of claim 2, wherein the merging step comprises:
17 identifying a placeholder within the XML document template for receiving
18 a corresponding value from the IMS message;
19 reading the value from the IMS message; and
20 inserting the value into a location within the XML document template
21 indicated by the placeholder.

1 8. The method of claim 7, wherein the placeholder comprises an XML
2 tag.

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4 9. The method of claim 7, wherein the identifying step comprises:
5 checking the placeholder for an associated tag indicating that a
6 corresponding value exists within the IMS message.

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8 10. The method of claim 7, wherein at least one placeholder has an
9 associated tag indicating the size of the corresponding value within the IMS
10 message, the reading step comprising:

11 reading a portion of the IMS message corresponding to the indicated size.

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13 ~~11.~~ A system for representing IMS messages as XML documents, the
14 system comprising:

15 a template generation module configured to generate an XML document
16 template from an IMS message definition; and
17 a merging module configured to merge an IMS message with the generated
18 template to produce a corresponding XML document.

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20 12. The system of claim 11, wherein the template generating module
21 comprises:

1 a compiler configured to compile an IMS message definition with an option
2 configured to produce an associated data (Adata) file; and
3 a parser configured to parse the Adata file using a DTD for representing
4 arbitrary IMS message definitions to generate an XML document
5 template corresponding to the IMS message definition.
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7 13. The system of claim 12, wherein the template generating module
8 comprises:

9 a parser configured to obtain a DTD for representing arbitrary IMS message
10 definitions and parse the IMS message definition using the DTD to
11 generate an XML document template corresponding to the IMS
12 message definition.
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14 14. The system of claim 12, wherein the Adata file comprises at least one
15 IMS message definition in a relatively language independent format compared with
16 program source code.
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18 15. The system of claim 12, further comprising:
19 a message definition extractor configured to extract the IMS message
20 definition from one of an application source code file and a copy file.
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- 1 16. The system of claim 12, further comprising:
- 2 a modeling tool configured to create a UML object model for representing
- 3 arbitrary IMS message definitions; and
- 4 an XMI utility for generating the DTD from the UML object model.
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- 6 17. The system of claim 12, wherein the merging module is further
- 7 configured to identify a placeholder within XML document template for receiving
- 8 a corresponding value from the IMS message; read the value from the IMS message;
- 9 and insert the value into a location within the XML document template indicated
- 10 by the placeholder.
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- 12 18. The system of claim 17, wherein the placeholder comprises an XML
- 13 tag.
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- 15 19. The system of claim 17, wherein at least one placeholder comprises an
- 16 associated tag indicating whether a corresponding value exists within the IMS
- 17 message.
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- 19 20. The system of claim 7, wherein at least one placeholder has an
- 20 associated tag indicating the size of the corresponding value within the IMS
- 21 message.

1 21. An article of manufacture comprising a program storage medium
2 readable by a processor and embodying one or more instructions executable by the
3 processor to perform a computer-implemented method for representing IMS
4 messages as XML documents, the method comprising:

5 generating an XML document template from an IMS message definition; and
6 merging an IMS message with the generated template to produce a
7 corresponding XML document.

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9 22. The article of claim 21, wherein the generating step comprises:
10 obtaining an IMS message definition;
11 obtaining a DTD for representing arbitrary IMS message definitions;
12 compiling the IMS message definition with an option configured to produce
13 an associated data (Adata) file; and
14 parsing the Adata file using the DTD to generate an XML document
15 template corresponding to the IMS message definition.

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17 23. The article of claim 22, wherein the IMS message definition comprises
18 program source code in a language selected from the group consisting of COBOL,
19 PL/I, Assembler, and Pascal.

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1 24. The article of claim 22, wherein the Adata file comprises at least one
2 IMS message definition in a relatively language independent format compared with
3 program source code.

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5 25. The article of claim 22, wherein obtaining the IMS message definition
6 comprises:

7 extracting the IMS message definition from one of an application source code
8 file and a copy file.

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10 26. The article of claim 22, wherein the step of obtaining the DTD
11 comprises:

12 creating a UML object model for representing arbitrary IMS message
13 definitions; and
14 processing the object model using an XMI utility to generate the DTD.

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16 27. The article of claim 22, wherein the merging step comprises:
17 identifying a placeholder within XML document template for receiving a
18 corresponding value from the IMS message;
19 reading the value from the IMS message; and
20 inserting the value into a location within the XML document template
21 indicated by the placeholder.

- 1 28. The article of claim 27, wherein the placeholder comprises an XML tag.
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- 3 29. The article of claim 27, wherein the identifying step comprises:
- 4 checking the placeholder for an associated tag indicating that a
- 5 corresponding value exists within the IMS message.
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- 7 30. The article of claim 27, wherein at least one placeholder has an
- 8 associated tag indicating the size of the corresponding value within the IMS
- 9 message, the reading step comprising:
- 10 reading a portion of the IMS message corresponding to the indicated size.
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